

WHAT IS CLAIMED IS:

1. A process for identifying an agent that modulates the activity of a cancer-related gene comprising:

- 5 (a) contacting a compound with a cell containing a gene that corresponds to a polynucleotide having a sequence selected from the group consisting of SEQ ID NO: 1, 2, 3 and 4 and under conditions promoting the expression of said gene; and
- (b) detecting a difference in expression of said gene relative to when
- 10 said compound is not present
- thereby identifying an agent that modulates the activity of a cancer-related gene.

2 The process of claim 1 wherein said gene has a sequence selected

15 from the group consisting of SEQ ID NO: 1, 2, 3 and 4.

3. The process of claim 1 wherein the cell is a cancer cell and the difference in expression is a decrease in expression.

20 4. The process of claim 3 wherein said cancer cell is a member selected from breast cancer, Wilms tumor and soft tissue fibromatosis.

5. A process for identifying an anti-neoplastic agent comprising contacting a cell exhibiting neoplastic activity with a compound first identified

25 as a cancer related gene modulator using the process of claim 1 and detecting a decrease in said neoplastic activity after said contacting compared to when said contacting does not occur.

6. The process of claim 5 wherein said neoplastic activity is

30 accelerated cellular replication.

7. The process of claim 5 wherein said decrease in neoplastic activity results from the death of the cell.

5 8. A process for identifying an anti-neoplastic agent comprising administering to an animal exhibiting a cancer condition an effective amount of an agent first identified according to the process of claim 1 and detecting a decrease in said cancerous condition.

10 9. A process for determining the cancerous status of a cell, comprising determining an increase in the level of expression in said cell of a gene that corresponds to a polynucleotide having a sequence selected from the group consisting of SEQ ID NO: 1, 2, 3 and 4 wherein an elevated expression relative to a known non-cancerous cell indicates a cancerous state or potentially cancerous state.

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10. The process of claim 9 wherein said elevated expression is due to an increased copy number.

20 11. An isolated polypeptide comprising an amino acid sequence homologous to an amino acid sequence selected from the group consisting of SEQ ID NO: 5 and 6 wherein any difference between said amino acid sequence and the sequence of SEQ ID NO: 5 and 6 is due solely to conservative amino acid substitutions and wherein said isolated polypeptide comprises at least one immunogenic fragment.

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12. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 5 and 6.

30 13. An antibody that reacts with a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 5 and 6.

14. The antibody of claim 13 wherein said antibody is a recombinant antibody.

5 15. The antibody of claim 13 wherein said antibody is a synthetic antibody.

16. The antibody of claim 13 wherein said antibody is a humanized antibody.

10 17. An immunoconjugate comprising the antibody of claim 13 and a cytotoxic agent.

15 18. The antibody of claim 17 wherein said cytotoxic agent is a member selected from the group consisting of a calicheamicin, a maytansinoid, an adozelesin, a cytotoxic protein, a taxol, a taxotere, a taxoid and DC1.

19. The immunoconjugate of claim 18 wherein said calicheamicin is calicheamicin γ_1^I , N-acetyl gamma calicheamicin dimethyl hydrazide or calicheamicin θ_1^I .

20 20. The immunoconjugate of claim 18 wherein said maytansinoid is DM1.

25 21. The immunoconjugate of claim 18 wherein said cytotoxic protein is ricin, abrin, gelonin, pseudomonas exotoxin or diphtheria toxin.

22. The immunoconjugate of claim 18 wherein said taxol is paclitaxel.

30 23. The immunoconjugate of claim 18 wherein said taxotere is docetaxel.

24. A process for treating cancer comprising contacting a cancerous cell *in vivo* with an agent having activity against an expression product encoded by a gene sequence selected from the group consisting of SEQ ID NO: 1, 2, 3 and 4.

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25. The process of claim 24 wherein said agent is an antibody of claim 13.

26. The process of claim 24 wherein said agent is an immunoconjugate
10 of claim 17.

27. An immunogenic composition comprising a polypeptide of claim 11.

28. An immunogenic composition comprising a polypeptide of claim 12.
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29. The process of claim 24 wherein said cancer is a member selected from breast cancer, Wilms tumor and soft tissue fibromatosis.

30. A process for treating cancer in an animal afflicted therewith
20 comprising administering to said animal an amount of an immunogenic composition of claim 27 sufficient to elicit the production of cytotoxic T lymphocytes specific for the polypeptide of claim 11.

31. A process for treating cancer in an animal afflicted therewith
25 comprising administering to said animal an amount of an immunogenic composition of claim 28 sufficient to elicit the production of cytotoxic T lymphocytes specific for the polypeptide of claim 12.

32. A process for treating a cancerous condition in an animal afflicted
30 therewith comprising administering to said animal a therapeutically effective amount of an agent first identified as having anti-neoplastic activity using the process of claim 8.

33. A process for protecting an animal against cancer comprising administering to an animal at risk of developing cancer a therapeutically effective amount of an agent first identified as having anti-neoplastic activity using the process of claim 8.

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34. The process of claim 30 wherein said animal is a human being.

35. The process of claim 30 wherein said cancer is a member selected from breast cancer, Wilms tumor and soft tissue fibromatosis.

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36. A method for producing test data with respect to the gene modulating activity of a compound comprising:

15 (a) contacting a compound with a cell containing a polynucleotide comprising a nucleotide sequence corresponding to a gene whose expression is increased in a cancerous cell over that in a non-cancerous cell and under conditions wherein said polynucleotide is being expressed,

(b) determining a change in expression of polynucleotides as a result of said contacting, and

20 (c) producing test data with respect to the gene modulating activity of said compound based on a decrease in the expression of the determined gene whose expression is otherwise increased in a cancerous cell over that in a non-cancerous cell indicating gene modulating activity.